FAA FREE FLIGHT

CDM Benefits Review

November 2003

Overview

Collaborative Decision Making (CDM) is a joint government/industry initiative aimed at improving air traffic management through increased information exchange among the various parties in the aviation community and improved decision support tools. The program is a core technology in the FAA's Free Flight program with participants from the FAA, air carriers, other aviation stakeholders, and academia.

CDM is developing several decision support tools, including:

- Flight Schedule Monitor
- Flight Schedule Analyzer
- Collaborative Convective Forecast Product
- Access to Runway Visual Range status information
- Route Management Tool
- Common Constraint Situation Display
- Diversion Recovery Page
- Airport Demand Chart
- Post Operations Evaluation Tool

Diversion Recovery Program

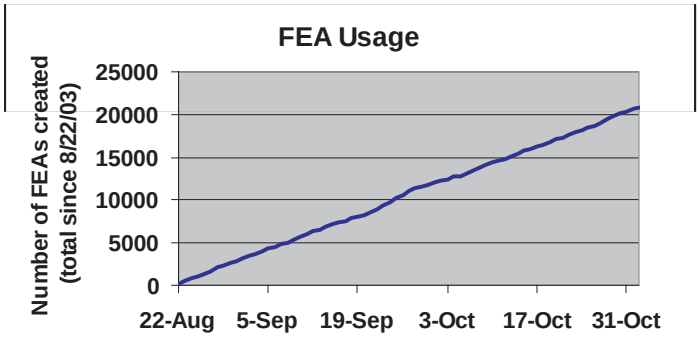
CDM's Diversion Recovery Program is an initiative orchestrated by the ATCSCC and users to minimize additional delays for those flights that have been diverted to other airports as a result of weather or other phenomena. During the summer convective weather season, diversion recovery events occur almost daily. With the Diversion Recovery Program these flights are given priority status for their return to the original destination, minimizing the impact on airline schedules. Feedback from airlines has been very positive.

Recently, an additional function has been added to the webpage that displays the load added to diversion airports and the current departure delays. Airlines use this information to better manage diversions minimizing additional delay. As with other CDM initiatives, sharing near real time operational data with customers allows them to improve performance under constrained conditions.

Flow Evaluation Area

The Flow Evaluation Area (FEA) capability allows traffic managers to identify flights that may be directly impacted by a potentially constrained area. A dynamic flight list provides real-time data on affected flights to the airlines, increasing their ability to plan a reroute.

FEAs are also used to assess the need for miles in trail restrictions (MIT), enabling the tuning of MIT restrictions to more accurately capture what is actually needed. MIT restrictions have been reduced and even cancelled as a result of the use of FEAs. For example, on August 15, 2003, an MIT restriction was cancelled for flights from ZBW entering ZNY on the information provided by the FEA that there were no flights expected from ZOB that would need to merge with the ZBW flights. In an excerpt from a questionnaire of controllers at ZOB, one respondent wrote: "The FEA has fine-tuned our restriction process. One specific benefit is a better analysis of exactly when a restriction is needed or not needed on 2 competing lines of traffic."



FEA Usage results

In the past year, ARTCCs have had the ability to share FEAs enabling increased coordination and further minimizing unnecessary restrictions. Increased data sharing gives everyone the big picture improving decision making for better system efficiency.